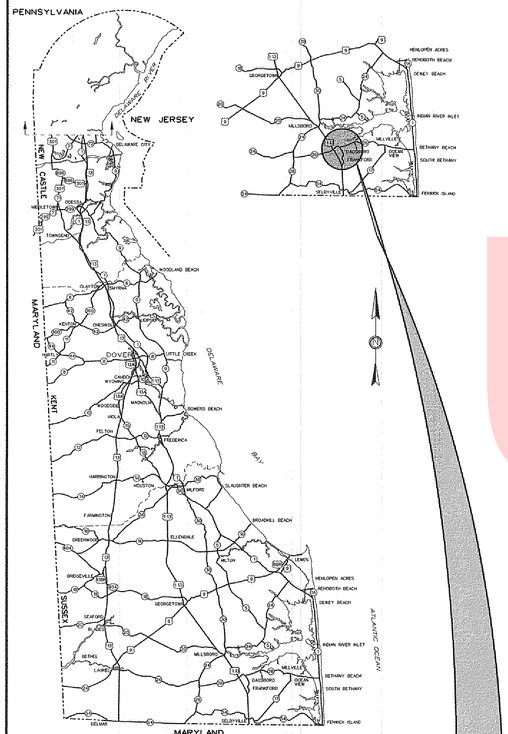


THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

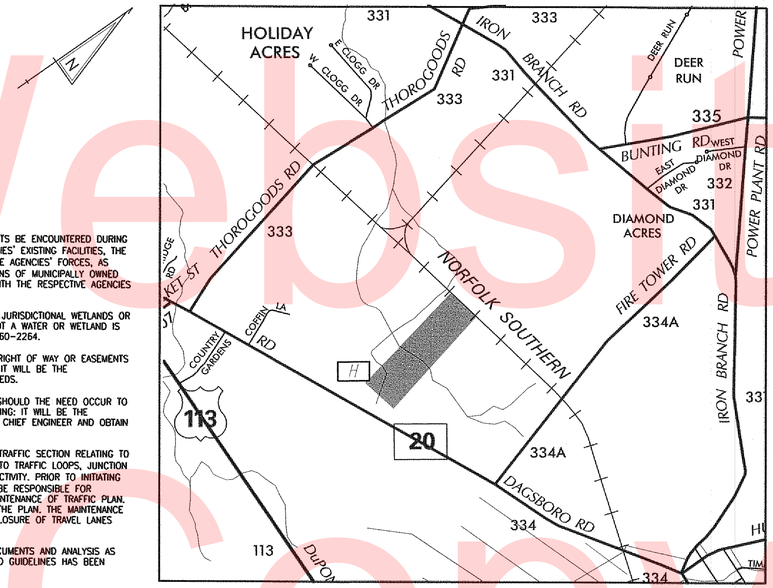
CONSTRUCTION PLANS FOR:

AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT NUMBER: T201380109

FEDERAL AID PROJECT NUMBER: N/A

COUNTY: SUSSEX M.R. #: N/A



LOCATION MAP

SCALE: N.T.S.

DESIGN DESIGNATION

FUNCTIONAL CLASS: N/A		D.H.V. PROJECTED: N/A	YEAR: N/A
TYPE OF CONSTRUCTION: MAINTENANCE		DESIGN SPEED: N/A	
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: N/A	
A.A.D.T. PROJECTED: N/A	YEAR: N/A	DIRECTION OF DISTRIBUTION: N/A	

INDEX OF SHEETS

SHEET Nº	TABLE OF CONTENTS
1	TITLE
2	NOTES
3-5	CONSTRUCTION PLAN
6	CONSTRUCTION DETAILS
7-8	STORMWATER MANAGEMENT PLAN
9-10	STORMWATER CONSTRUCTION DETAILS

TOTAL SHEETS: 10

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME

PREPARED BY
THE CONSULTING FIRM OF

JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future®

131 Continental Drive, Suite 109 Newark, DE 19713

RECOMMENDED 03/22/2016 DATE

BRADLEY P. HEAD — No. 13305 — DELAWARE PROFESSIONAL ENGINEER — SEAL

PROJECT NOTES:

1. NO UTILITY RELOCATION INVOLVEMENT IS ANTICIPATED. SHOULD ANY CONFLICTS BE ENCOUNTERED DURING CONSTRUCTION REQUIRING ADJUSTMENT AND/OR RELOCATION OF THE AGENCIES' EXISTING FACILITIES, THE NECESSARY RELOCATION WORK SHALL BE ACCOMPLISHED BY THE RESPECTIVE AGENCIES' FORCES, AS DIRECTED BY THE DISTRICT ENGINEER. ANY ADJUSTMENT AND/OR RELOCATIONS OF MUNICIPALLY OWNED FACILITIES SHALL BE DONE BY THE STATES CONTRACTOR IN ACCORDANCE WITH THE RESPECTIVE AGENCIES STANDARD SPECIFICATIONS AS DIRECTED BY THE DISTRICT ENGINEER.
2. NO ENVIRONMENTAL PERMITS ARE REQUIRED FOR THIS WORK PROVIDED NO JURISDICTIONAL WETLANDS OR WATERS ARE IMPACTED. IF THERE IS ANY QUESTION AS TO WHETHER OR NOT A WATER OR WETLAND IS JURISDICTIONAL, CONTACT THE DEL DOT ENVIRONMENTAL SECTION AT 302-760-2264.
3. IT IS ANTICIPATED THAT ALL WORK WILL OCCUR WITHIN DELDOT'S EXISTING RIGHT OF WAY OR EASEMENTS AREAS. SHOULD THE NEED OCCUR TO TRESPASS ONTO PRIVATE PROPERTY: IT WILL BE THE RESPONSIBILITY OF THE PROJECT MANAGER TO SECURE SUCH TRESPASS NEEDS.
4. IT IS ANTICIPATED THAT ALL WILL OCCUR WITHIN DELDOT'S RIGHT OF WAY. SHOULD THE NEED OCCUR TO TRESPASS ONTO RAILROAD PROPERTY, INCLUDING THE HIGHWAY-RAIL CROSSING: IT WILL BE THE RESPONSIBILITY OF THE THE PROJECT MANAGER TO CONTACT THE RAILROAD CHIEF ENGINEER AND OBTAIN WRITTEN AUTHORIZATION BEFORE ENTERING.
5. THE PROJECT MANAGER SHALL RESPONSIBLE FOR COORDINATION WITH THE TRAFFIC SECTION RELATING TO ANY IMPACTS TO TRAFFIC SECTION FACILITIES (INCLUDING BUT NOT LIMITED TO TRAFFIC LOOPS, JUNCTION WELLS ETC.) AT LEAST 4 WEEKS IN ADVANCE OF THE THE START OF THE ACTIVITY. PRIOR TO INITIATING ANY WORK ON THIS CONTRACT (OR SITES). THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING FOR APPROVAL OF THE SAFETY SECTION, A MAINTENANCE OF TRAFFIC PLAN. SUFFICIENT TIME SHALL BE PROVIDED FOR THE REVIEW AND APPROVAL OF THE PLAN. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE PROPOSED TIME RESTRICTIONS ON THE CLOSURE OF TRAVEL LANES SUBJECT TO THE APPROVAL OF THE SAFETY SECTION.
6. THE PROJECT MANAGER IS RESPONSIBLE FOR ENSURING ANY REQUIRED DOCUMENTS AND ANALYSIS AS PART OF THE ADOPTED WORK ZONE SAFETY AND MOBILITY PROCEDURES AND GUIDELINES HAS BEEN COMPLETED PRIOR TO ANY WORK STARTING ON THIS CONTRACT.

RECOMMENDED

MAINTENANCE ENGINEER — DATE 4-5-16

DISTRICT ENGINEER — DATE 4/5/16

STATEWIDE SUPPORT SERVICES ENGINEER — DATE 4/7/16

ASSISTANT DIRECTOR STATEWIDE SUPPORT SERVICES — DATE 4/7/16

DIRECTOR, MAINTENANCE & OPERATIONS — DATE 4/11/16

RECOMMENDED

STORMWATER ENGINEER

DATE 03/24/2016

VINCENT W. DAVIS — REGISTERED No. 12898 — DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED AS TO PROCESS

CHIEF ENGINEER

DATE 4/4/2016

SEAL

RECOMMENDED

BRIDGE DESIGN ENGINEER

DATE

SEAL

RECOMMENDED

GROUP ENGINEER, PROJECT DEVELOPMENT

DATE

SEAL

RECOMMENDED

ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS

DATE

SEAL

APPROVED

CHIEF ENGINEER

DATE

SEAL

SUBMISSION STATUS: PS&E
DATE PLOTTED: 3/22/2016
JMT FILE LOCATION: Q:\NDE\101552_026_Dagsboro_Yard_Improv\CADD\TC.dgn

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

2. SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
( ) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MEDIUM	THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR PRIOR TO THE EXECUTION OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

3. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

( )	NONE
( )	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	RASTER FILES, IN .CAL FILE FORMAT, FOR ALL PLAN SHEETS.
(X)	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

4. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

( )	CROSS SECTIONS
( )	RIGHT-OF-WAY PLANS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)

5. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 743000.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

6. THE DISTURBED AREA FOR THIS PROJECT IS 11.3 ACRES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.

8. THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

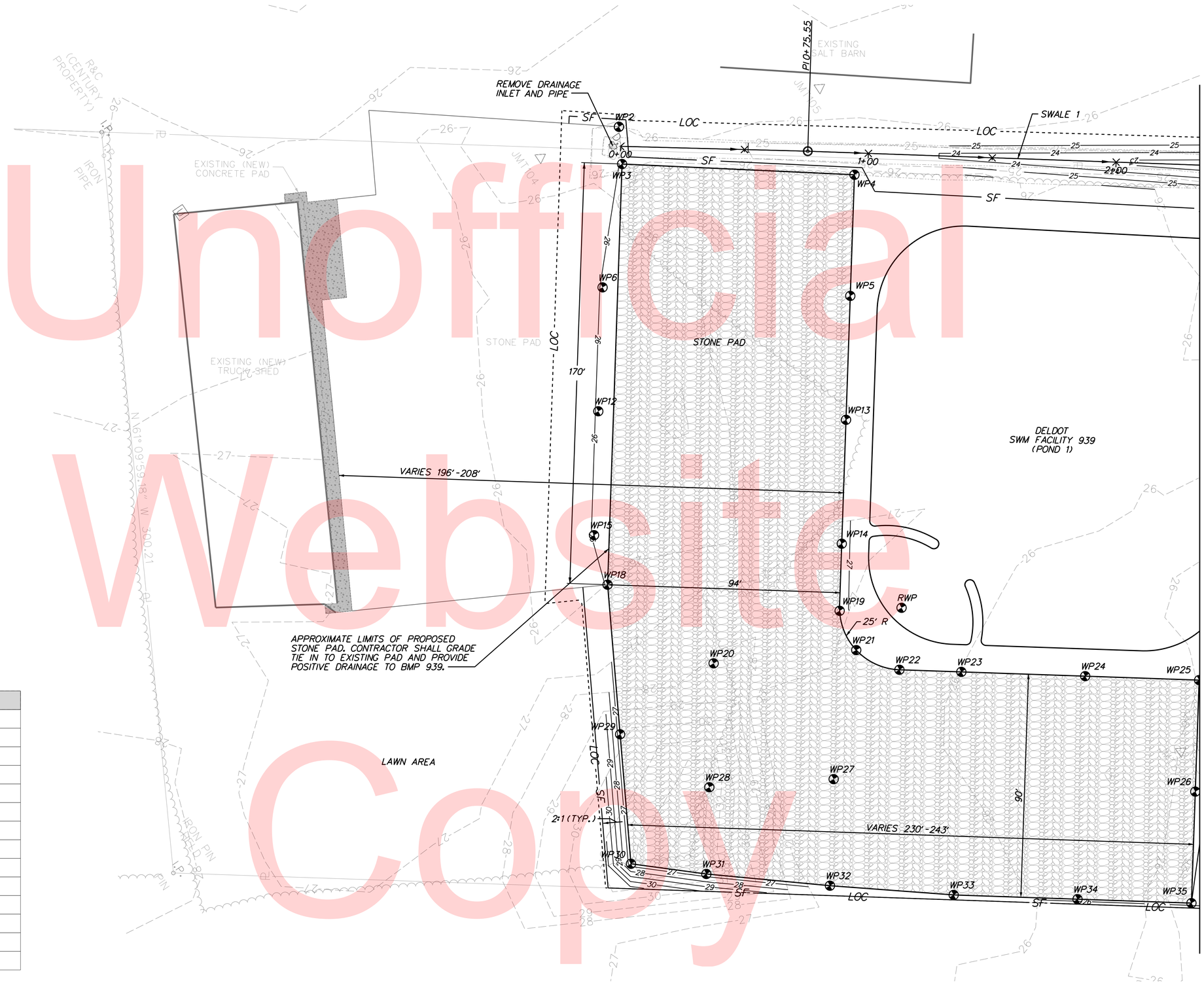
SECTION 200

1. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

2. ALL TREES, SHRUBS, AND ROOTMAT WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED IN ITS ENTIRETY AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. PAYMENT FOR TREE, SHRUB AND ROOTMAT REMOVAL SHALL BE INCLUDED IN 201000-CLEARING AND GRUBBING.

3. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   - DRAINAGE INLET, SHEET 3.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	AREA 5 MAINTENANCE YARD IMPROVEMENTS	CONTRACT T201380109	BRIDGE NO.	SHEET NO. 2
				COUNTY SUSSEX	DESIGNED BY: JMT	NOTES
					CHECKED BY: BPH	TOTAL SHTS. 10



LEGEND	
	EXISTING CONCRETE
×——×	PROPOSED SWALE
	RIPRAP
	PROPOSED STONE PAD
	PROPOSED ASPHALT PAD
	POINT LOCATION
PB	EXISTING PROPERTY LINE
	FENCE - CHAINLINK OR STRANDED
	WOODS LINE BOUNDARY
	DITCH OR STREAM CENTERLINE
LOC	LIMIT OF CONSTRUCTION
SF	SILT FENCE
26	EXISTING CONTOUR
26	PROPOSED CONTOUR

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\CP.DGN [SHEET: CP01]

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 20 40 60 FEET

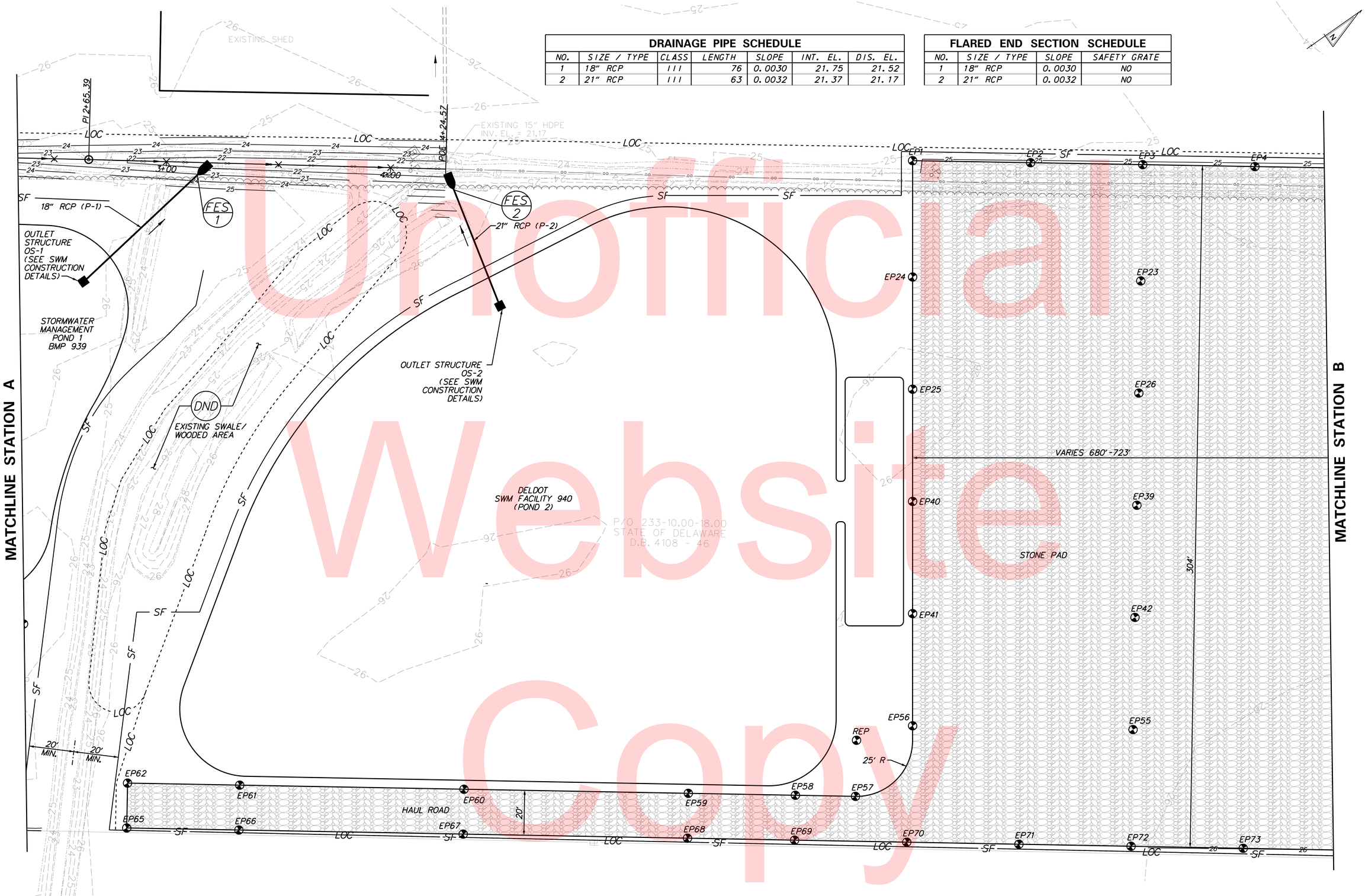
AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT	BRIDGE NO.	
T201380109	DESIGNED BY: JMT	CONSTRUCTION PLAN
COUNTY	CHECKED BY: BPH	
SUSSEX		

SHEET NO.
3
TOTAL SHTS.
10

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
1	18" RCP	III	76	0.0030	21.75	21.52
2	21" RCP	III	63	0.0032	21.37	21.17

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
1	18" RCP	0.0030	NO
2	21" RCP	0.0032	NO



PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\CP.DGN [SHEET: CP02]

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 20 40 60 FEET

AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT	BRIDGE NO.
T201380109	DESIGNED BY: JMT
COUNTY	CHECKED BY: BPH
SUSSEX	

CONSTRUCTION PLAN

SHEET NO.	TOTAL SHTS.
4	10

MATCHLINE STATION B

EP5 EP6 EP7 EP8 EP9 EP10 EP11 EP12 EP13 EP14 EP15 EP16 EP17 EP18 EP19 EP20 EP21 EP22 EP27 EP28 EP29 EP30 EP31 EP32 EP33 EP34 EP35 EP36 EP37 EP38 EP43 EP44 EP45 EP46 EP47 EP48 EP49 EP50 EP51 EP52 EP53 EP54 EP74 EP75 EP76 EP77 EP78 EP79 EP80 EP81 EP82 EP83 EP84

HP1 HP2 HP3 HP4

SF LOC

VARIES 680'-723'

STONE PAD

304'

130' X 130' ASPHALT PAD

30'

2:1 (TYP.)

N

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\CP.DGN [SHEET: CP03]

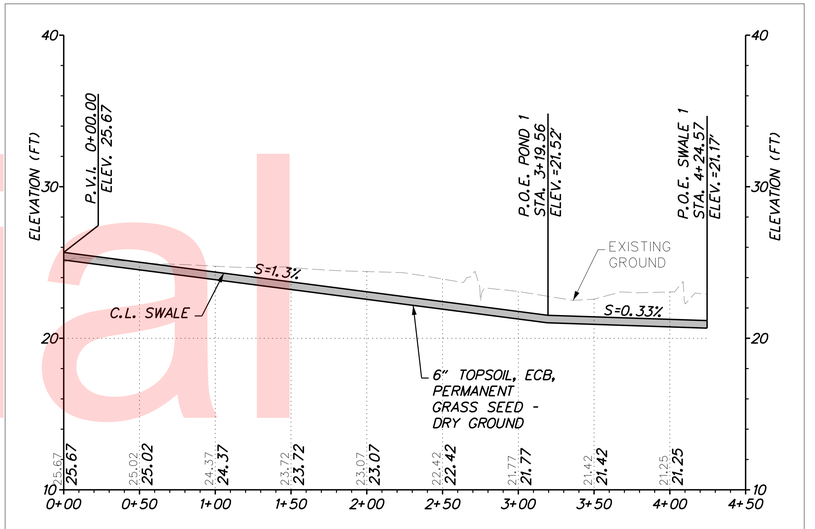
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 20 40 60 FEET	AREA 5 MAINTENANCE YARD IMPROVEMENTS	CONTRACT T201380109	BRIDGE NO.	CONSTRUCTION PLAN	SHEET NO. 5
				COUNTY SUSSEX	DESIGNED BY: JMT		TOTAL SHTS. 10
					CHECKED BY: BPH		

COORDINATE LIST

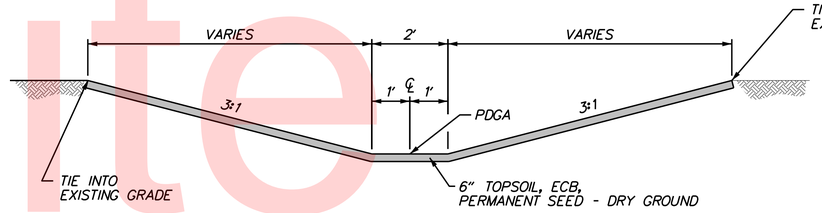
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
WP2	204407.37	700168.81	26.60	STONE PAD
WP3	204399.94	700181.90	26.58	STONE PAD
WP4	204474.87	700238.42	26.50	STONE PAD
WP5	204445.89	700277.79	26.39	STONE PAD
WP6	204365.35	700218.52	26.55	STONE PAD
WP12	204335.72	700258.79	26.59	STONE PAD
WP13	204416.25	700318.06	26.29	STONE PAD
WP14	204386.62	700358.33	26.18	STONE PAD
WP15	204306.08	700299.06	26.54	STONE PAD
WP18	204299.31	700318.64	26.51	STONE PAD
WP19	204370.64	700380.18	26.11	STONE PAD
WP20	204316.71	700368.96	26.31	STONE PAD
WP21	204367.22	700397.04	26.07	STONE PAD
WP22	204377.12	700413.42	26.09	STONE PAD
WP23	204397.25	700428.24	26.11	STONE PAD
WP24	204437.52	700457.87	26.15	STONE PAD
WP25	204474.56	700485.13	26.20	STONE PAD
WP26	204447.88	700521.38	26.34	STONE PAD
WP27	204330.31	700434.84	26.20	STONE PAD
WP28	204287.07	700409.23	26.27	STONE PAD
WP29	204269.43	700371.28	26.48	STONE PAD
WP30	204243.55	700416.87	26.45	STONE PAD
WP31	204266.33	700437.42	26.45	STONE PAD
WP32	204304.82	700469.48	26.35	STONE PAD
WP33	204343.90	700500.72	26.37	STONE PAD
WP34	204384.17	700530.36	26.42	STONE PAD
WP35	204421.21	700557.62	26.47	STONE PAD
EP1	204917.48	700544.43	25.35	STONE PAD
EP2	204959.97	700575.46	25.51	STONE PAD
EP3	205000.34	700604.94	25.66	STONE PAD
EP4	205040.73	700634.42	25.80	STONE PAD
EP5	205081.11	700663.91	25.95	STONE PAD
EP6	205121.49	700693.39	26.10	STONE PAD
EP7	205161.87	700722.88	26.25	STONE PAD
EP8	205202.25	700752.37	26.40	STONE PAD
EP9	205242.63	700781.85	26.55	STONE PAD
EP10	205283.02	700811.32	26.70	STONE PAD
EP11	205323.46	700840.73	26.84	STONE PAD
EP12	205363.92	700870.10	26.99	STONE PAD
EP13	205404.37	700899.50	27.14	STONE PAD
EP14	205444.81	700928.90	27.29	STONE PAD
EP15	205485.34	700958.18	27.44	STONE PAD
EP16	205501.77	700970.00	27.50	STONE PAD
EP17	205465.48	701008.66	27.38	STONE PAD
EP18	205373.63	700941.61	27.03	STONE PAD
EP19	205292.86	700882.65	26.73	STONE PAD
EP20	205212.09	700823.69	26.42	STONE PAD
EP21	205131.32	700764.73	26.12	STONE PAD
EP22	205050.55	700705.76	25.81	STONE PAD
EP23	204969.78	700646.80	25.51	STONE PAD
EP24	204887.63	700586.83	25.20	STONE PAD
EP25	204858.84	700627.72	25.10	STONE PAD
EP26	204940.30	700687.19	25.41	STONE PAD
EP27	205021.07	700746.15	25.71	STONE PAD
EP28	205101.84	700805.11	26.02	STONE PAD
EP29	205182.61	700864.07	26.32	STONE PAD
EP30	205263.38	700923.03	26.63	STONE PAD
EP31	205344.15	700981.99	26.93	STONE PAD
EP32	205431.00	701045.39	27.26	STONE PAD
EP33	205396.51	701082.12	27.15	STONE PAD
EP34	205314.67	701022.38	26.85	STONE PAD
EP35	205233.90	700963.41	26.55	STONE PAD
EP36	205153.13	700904.45	26.25	STONE PAD
EP37	205072.36	700845.49	25.95	STONE PAD
EP38	204991.59	700786.53	25.65	STONE PAD
EP39	204910.82	700727.57	25.35	STONE PAD
EP40	204830.05	700668.61	25.05	STONE PAD
EP41	204801.27	700709.50	25.10	STONE PAD
EP42	204881.34	700767.96	25.41	STONE PAD

COORDINATE LIST

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
EP43	204962.11	700826.92	25.72	STONE PAD
EP44	205042.88	700885.88	26.03	STONE PAD
EP45	205123.65	700944.84	26.34	STONE PAD
EP46	205204.42	701003.80	26.65	STONE PAD
EP47	205285.19	701062.76	26.96	STONE PAD
EP48	205362.03	701118.85	27.26	STONE PAD
EP49	205327.55	701155.58	27.38	STONE PAD
EP50	205255.71	701103.14	27.10	STONE PAD
EP51	205174.94	701044.18	26.79	STONE PAD
EP52	205094.17	700985.22	26.48	STONE PAD
EP53	205013.40	700926.26	26.17	STONE PAD
EP54	204932.63	700867.30	25.86	STONE PAD
EP55	204851.86	700808.34	25.55	STONE PAD
EP56	204772.48	700750.39	25.25	STONE PAD
EP57	204733.56	700761.45	25.12	STONE PAD
EP58	204711.93	700745.63	25.05	STONE PAD
EP59	204673.40	700717.44	25.05	STONE PAD
EP60	204592.69	700658.40	25.05	STONE PAD
EP61	204511.99	700599.35	25.05	STONE PAD
EP62	204471.63	700569.83	25.53	STONE PAD
EP65	204459.82	700585.97	25.73	STONE PAD
EP66	204500.18	700615.49	25.45	STONE PAD
EP67	204580.88	700674.54	25.45	STONE PAD
EP68	204661.59	700733.58	25.45	STONE PAD
EP69	204700.14	700761.78	25.48	STONE PAD
EP70	204740.49	700791.30	25.52	STONE PAD
EP71	204780.85	700820.83	25.55	STONE PAD
EP72	204821.20	700850.35	25.70	STONE PAD
EP73	204861.55	700879.87	25.86	STONE PAD
EP74	204901.91	700909.39	26.01	STONE PAD
EP75	204942.26	700938.92	26.16	STONE PAD
EP76	204982.62	700968.44	26.32	STONE PAD
EP77	205022.97	700997.96	26.47	STONE PAD
EP78	205063.32	701027.48	26.63	STONE PAD
EP79	205103.68	701057.01	26.78	STONE PAD
EP80	205144.03	701086.53	26.93	STONE PAD
EP81	205184.38	701116.05	27.09	STONE PAD
EP82	205224.74	701145.57	27.24	STONE PAD
EP83	205265.09	701175.09	27.39	STONE PAD
EP84	205291.26	701194.24	27.50	STONE PAD
RWP	204391.93	700393.28	-	25' RADIUS PT.
REP	204748.32	700741.28	-	25' RADIUS PT.
HP1	205259.39	700972.68	-	HOTMIX PAD
HP2	205364.31	701049.43	-	HOTMIX PAD
HP3	205287.55	701154.35	-	HOTMIX PAD
HP4	205182.63	701077.60	-	HOTMIX PAD



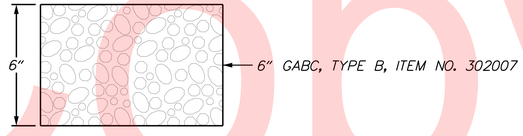
SWALE 1 PROFILE
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



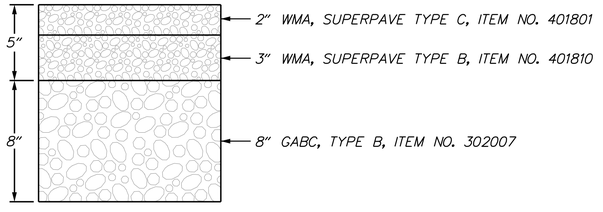
SWALE NOTES:

1. CONSTRUCT THE SWALE FROM THE DOWNSTREAM END, STABILIZING THE DISTURBED AREA BEFORE PROCEEDING UPSTREAM.
2. OVER EXCAVATE THE SIDES AND BOTTOM OF SWALE 6" FOR TOPSOIL PLACEMENT.

SWALE 1 TYPICAL SECTION
N.T.S.



STONE PAD TYPICAL SECTION
N.T.S.



ASPHALT PAD TYPICAL SECTION
N.T.S.

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\DT.DGN [SHEET: DT03]

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

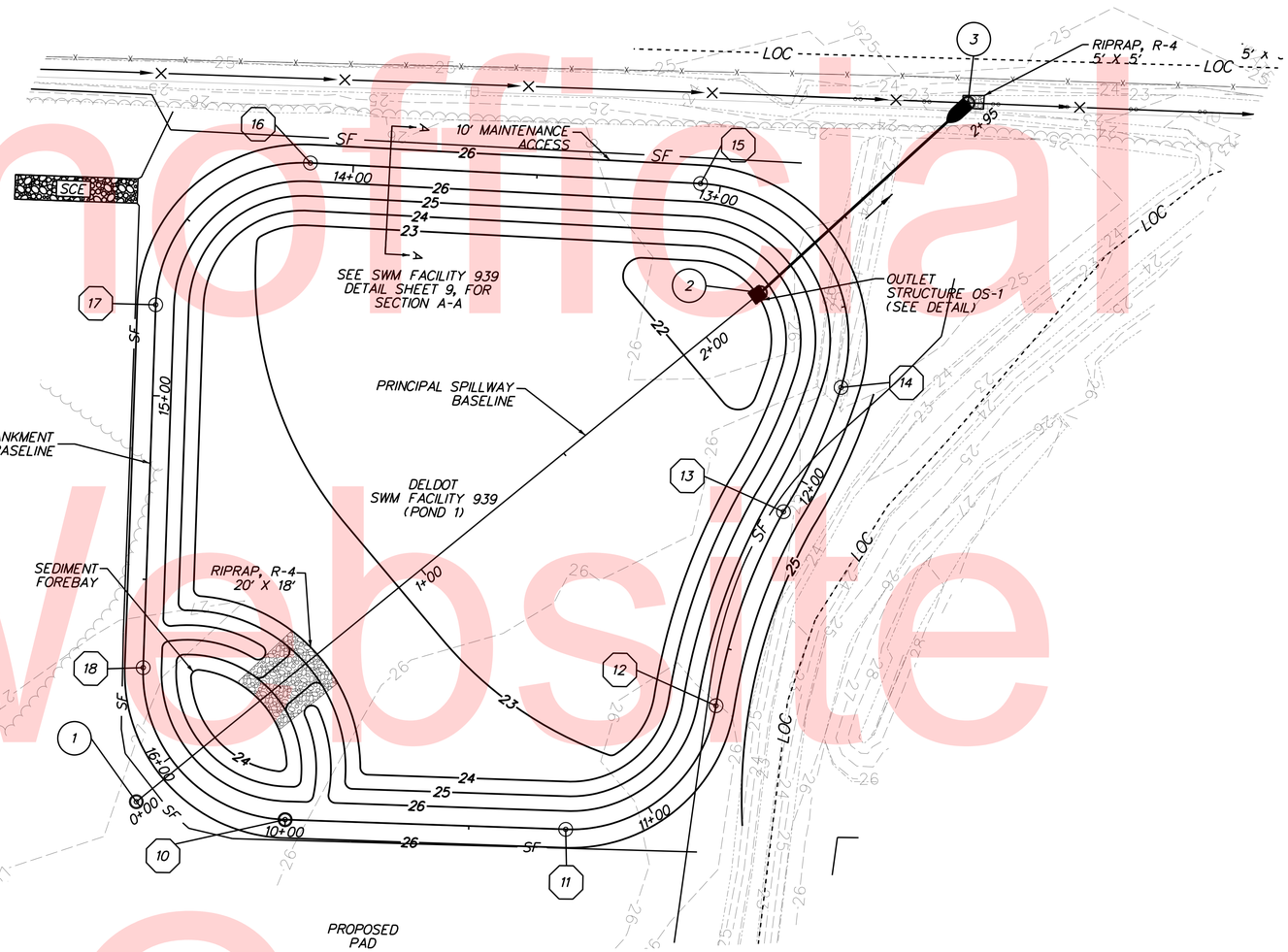
NOT TO SCALE

AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT T201380109
COUNTY SUSSEX
BRIDGE NO.
DESIGNED BY: JMT
CHECKED BY: BPH

CONSTRUCTION DETAILS

SHEET NO. 6
TOTAL SHTS. 10



(X) POND 1 EMBANKMENT BASELINE			
POINT NO.	STATION	NORTHING	EASTING
10 POB	10+00.00	204397.58	700421.03
11 PC	10+76.36	204459.08	700466.30
PI	11+11.65	204487.51	700487.22
RADIUS = 40.00'			
12 PT/PC	11+34.20	204511.81	700461.62
PI	11+62.57	204531.34	700441.04
RADIUS = 160.00'			
13 PT/PC	11+90.35	204556.75	700428.43
PI	12+09.12	204573.93	700420.88
RADIUS = 152.45'			
14 PT/PC	12+27.69	204558.76	700409.39
PI	12+82.91	204632.40	700375.56
RADIUS = 42.50'			
15 PT	13+05.45	204588.53	700342.03
16 PC	14+11.70	204504.12	700277.50
PI	14+52.43	204471.76	700252.77
RADIUS = 40.00'			
17 PT	14+75.26	204447.62	700285.57
18 PC	15+74.01	204389.08	700365.11
PI	16+14.01	204365.37	700397.32
RADIUS = 40.00'			
10 PT/POE	1++36.85	204397.58	700421.03

(X) POND 1 SPILLWAY BASELINE			
POINT NO.	STATION	NORTHING	EASTING
1 POB	0+00.00	204366.95	700394.16
2 PI	2+19.05	204585.22	700375.72
3 POE	2+95.47	204660.89	700365.05

POND DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL.	STORAGE VOL. (AC-FT)
QUALITY STORM	2.19	0.00	22.89	0.112
2 -YEAR	5.36	0.00	23.48	0.311
10 - YEAR	9.95	0.00	24.21	0.633
100 - YEAR	19.42	8.86	24.64	0.847

HAZARD CLASSIFICATION: CLASS A AS PER POND CODE 378
DRAINAGE AREA TO FACILITY: 3.37 AC.
MANAGEMENT PROVIDED BY FACILITY: WATER QUANTITY FOR 2, 10, AND 100 YEAR STORMS
WATER QUALITY BY INFILTRATION ON 2.0" NRCS RAINFALL EVENT

NOTES:

1. THE POND BOTTOM SHALL RECEIVE PERMANENT SEEDING, WET GROUND (ITEM 908015).

2 THE POND EMBANKMENT SHALL RECEIVE PERMANENT SEEDING, DRY GROUND (ITEM 908014).

3. EMBANKMENT SLOPE SHALL BE TOPSOILED, SEEDED, AND MULCHED.

LEGEND

- LOC — LIMIT OF CONSTRUCTION
- 45 — PROPOSED CONTOUR
- 45 — EXISTING CONTOUR
- SF — SILT FENCE
- PROPOSED SWALE

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\SW.DGN [SHEET: SW 1]

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

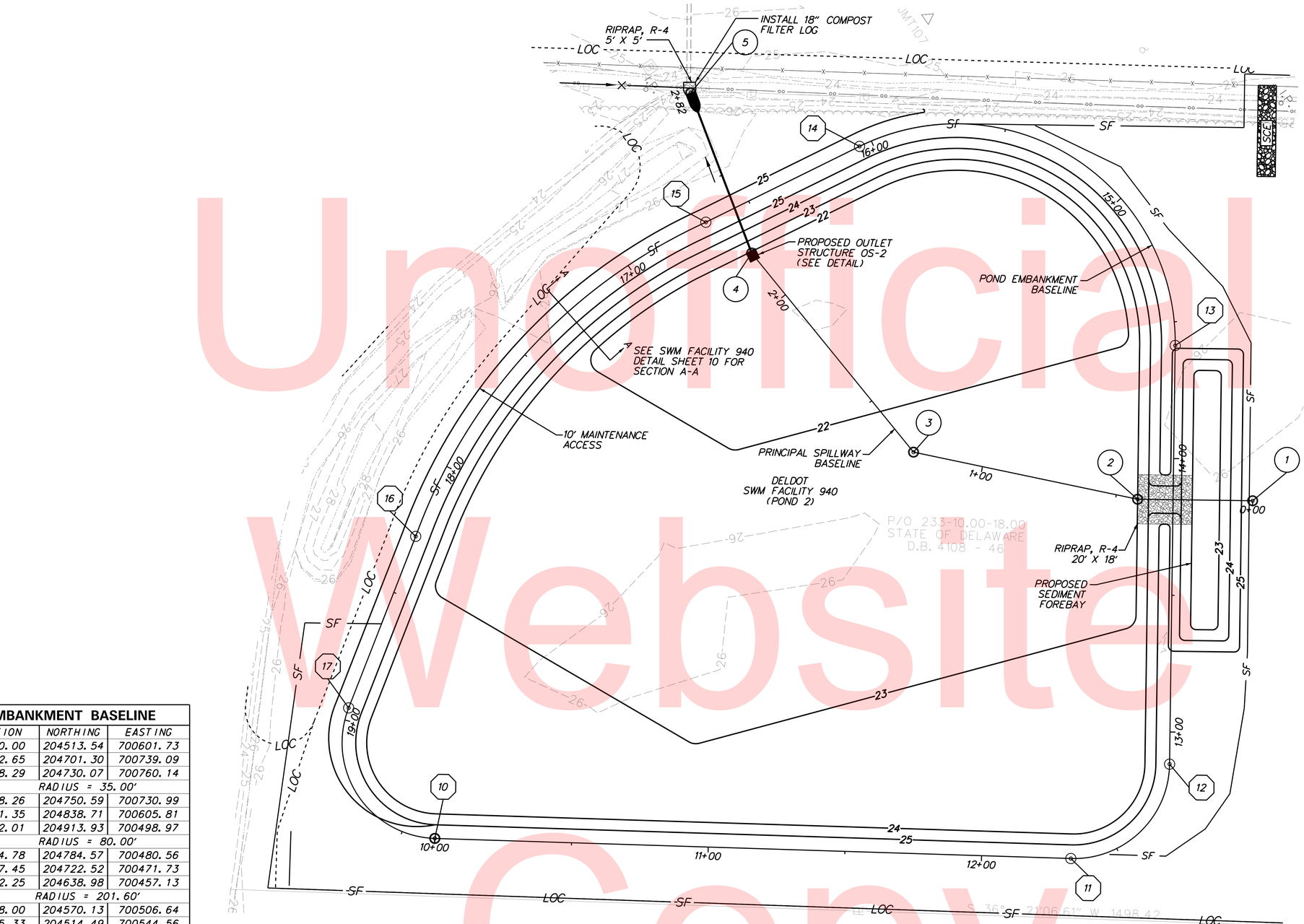
SCALE 0 20 40 60 FEET

AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT	BRIDGE NO.	
T201380109	DESIGNED BY: JMT	
COUNTY	CHECKED BY: BPH	
SUSSEX		

STORMWATER MANAGEMENT PLAN

SHEET NO.
7
TOTAL SHTS.
10



(X) POND 2 EMBANKMENT BASELINE			
POINT NO.	STATION	NORTHING	EASTING
10 POB	10+00.00	204513.54	700601.73
11 PC	12+32.65	204701.30	700739.09
PI	12+68.29	204730.07	700760.14
RADIUS = 35.00'			
12 PT	12+88.26	204750.59	700730.99
13 PC	14+41.35	204838.71	700605.81
PI	15+72.01	204913.93	700498.97
RADIUS = 80.00'			
14 PT	16+04.78	204784.57	700480.56
15 PC	16+67.45	204722.52	700471.73
PI	17+52.25	204638.98	700457.13
RADIUS = 201.60'			
16 PT	18+28.00	204570.13	700506.64
17 PC	18+95.33	204514.49	700544.56
PI	19+44.89	204473.54	700572.47
RADIUS = 35.00'			
10 PT/POE	19+62.24	204513.54	700601.73

(X) POND 2 SPILLWAY BASELINE			
POINT NO.	STATION	NORTHING	EASTING
1 POB	0+00.00	204830.02	700668.66
2 PI	0+42.07	204795.62	700644.44
3 PI	1+25.77	204737.73	700583.98
4 PI	2+19.59	204730.00	700490.49
5 POE	2+82.26	204744.69	700429.57

POND DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL.	STORAGE VOL. (AC-FT)
QUALITY STORM	5.48	0.00	22.46	0.243
2 -YEAR	12.87	1.41	22.92	0.550
10 - YEAR	23.41	4.00	23.37	0.989
100 - YEAR	45.05	12.95	24.02	1.754

HAZARD CLASSIFICATION: CLASS A AS PER POND CODE 378
DRAINAGE AREA TO FACILITY: 7.00 AC.
MANAGEMENT PROVIDED BY FACILITY: WATER QUANTITY FOR 2, 10, AND 100 YEAR STORMS
WATER QUALITY BY INFILTRATION ON 2.0" NRCS RAINFALL EVENT

NOTES:

1. THE POND BOTTOM SHALL RECEIVE PERMANENT SEEDING, WET GROUND (ITEM 908015).

2 THE POND EMBANKMENT SHALL RECEIVE PERMANENT SEEDING, DRY GROUND (ITEM 908014).

3. EMBANKMENT SLOPE SHALL BE TOPSOILED, SEEDED, AND MULCHED.

LEGEND

- LOC — LIMIT OF CONSTRUCTION
- 45 — PROPOSED CONTOUR
- 45 — EXISTING CONTOUR
- SF — SILT FENCE
- X — PROPOSED SWALE

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\SW.DGN [SHEET: SW 2]

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 20 40 60 FEET

AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT	BRIDGE NO.
T201380109	DESIGNED BY: JMT
COUNTY	CHECKED BY: BPH
SUSSEX	

STORMWATER MANAGEMENT PLAN

SHEET NO.	TOTAL SHTS.
8	10

INFILTRATION BASIN CONSTRUCTION SEQUENCE & NOTES (SWM FACILITY 939)

IF THE INFILTRATION BASIN IS TO BE USED AS A SEDIMENT BASIN DURING CONSTRUCTION, GRADING SHALL ONLY BE COMPLETED TO 1-FOOT ABOVE THE PERMANENT BOTTOM ELEVATION.

A. CONSTRUCTION:

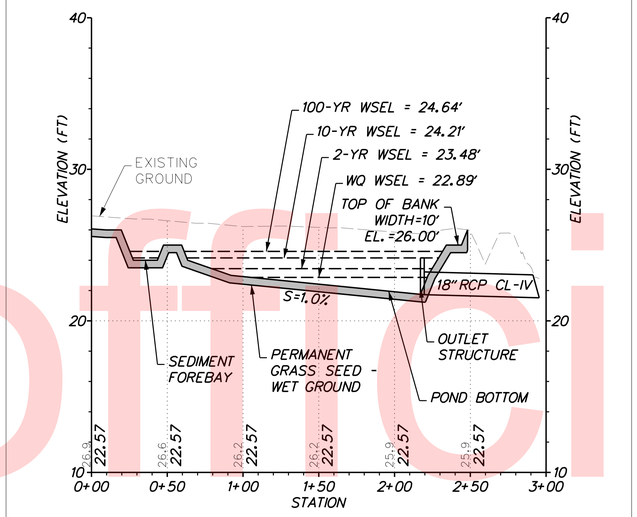
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AS NEEDED.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
3. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PLANS.
4. CLEAR AND GRUB REMAINING AREA FOR STORMWATER MANAGEMENT FACILITY CONSTRUCTION.
5. CONSTRUCT BASIN OUTLET AND OUTFALL AS SHOWN ON THE PLANS. DEWATER FOUNDATION AS NEEDED IN ACCORDANCE WITH DEWATERING PRACTICES AS SHOWN IN THE STANDARD SPECIFICATIONS.
6. EXCAVATE THE FACILITY AND COMPLETE TO 1-FOOT ABOVE THE PERMANENT BOTTOM ELEVATION. NO HEAVY EQUIPMENT SHALL BE USED AT THE PERMANENT BOTTOM ELEVATION. THE FINAL 1-FOOT OF MATERIAL TO BE EXCAVATED SHALL BE STARTED AT ONE SIDE OF THE BASIN AND REMOVED GOING ACROSS OR STARTED IN THE MIDDLE AND WORKED TOWARDS THE OUTSIDES.
7. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - DRY GROUND AS SPECIFIED IN THE STANDARD SPECIFICATIONS. IF NOT MEETING FINAL ELEVATIONS AND GRADES, THEN SEED WITH TEMPORARY SEED - DRY GROUND AS SPECIFIED IN THE STANDARD SPECIFICATIONS.
8. BASIN BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - WET GROUND.

B. MAINTENANCE OF INFILTRATION BASIN BEING USED AS A SEDIMENT BASIN:

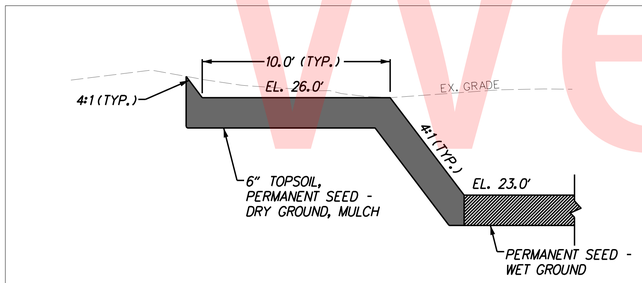
1. THE CONTRACTOR SHALL INSPECT THE BASIN THE NEXT WORK DAY FOLLOWING A RAIN EVENT AND MAKE ANY REPAIRS AS NEEDED.
2. ANY EXCESS SEDIMENT AROUND THE OUTFALL AREA WILL BE REMOVED AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

C. CONVERSION TO PERMANENT STORMWATER MANAGEMENT FACILITY:

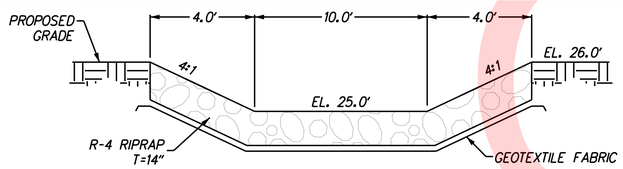
1. CONVERT THE BASIN INTO THE PERMANENT STORMWATER MANAGEMENT FACILITY AFTER ALL AREAS DRAINING TO THE BASIN HAVE ATTAINED FINAL STABILIZATION AND THE STORMWATER ENGINEER HAS APPROVED THE CONVERSION.
2. PUMP DOWN ANY STANDING WATER IN THE BASIN AS NECESSARY AS PER THE STANDARD SPECIFICATIONS.
3. REMOVE ANY EXCESS SEDIMENT. NO HEAVY EQUIPMENT SHALL BE USED AT THE PERMANENT BOTTOM ELEVATION. THE FINAL 1-FOOT OF MATERIAL TO BE EXCAVATED SHALL BE STARTED AT FROM ONE SIDE OF THE BASIN AND REMOVED GOING ACROSS OR STARTED IN THE MIDDLE AND WORKED TOWARDS THE OUTSIDES.
4. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - DRY GROUND AS SPECIFIED IN THE STANDARD SPECIFICATIONS.
5. BASIN BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - WET GROUND.



SWM POND 1 SPILLWAY PROFILE
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

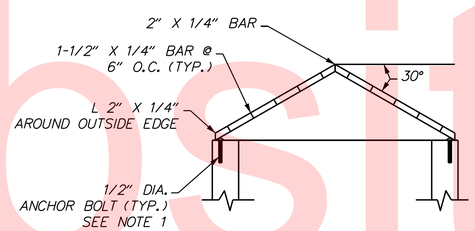


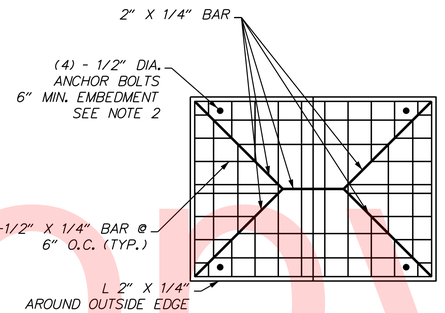
POND 1 EMBANKMENT SECTION A-A
N.T.S.



POND SEDIMENT FOREBAY 1 RIPRAP APRON
N.T.S.

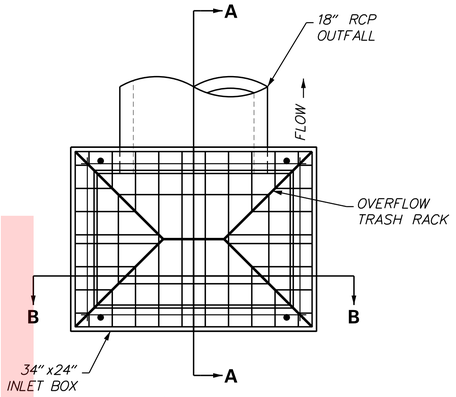
NOTES:
1. INSTALL RIPRAP APRON STARTING AT STA. 0+43.39.
2. RIPRAP APRON LENGTH: 20.0'



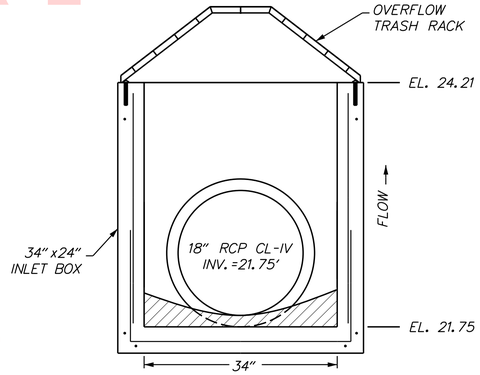


NOTES:
1. ANCHOR BOLTS TO BE STAINLESS STEEL ONLY.
2. TRASH RACK BARS TO BE ALUMINUM ONLY.

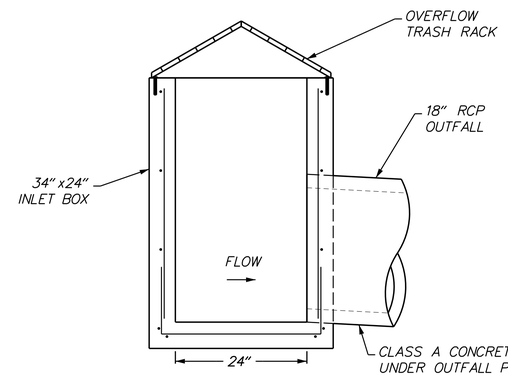
OVERFLOW TRASH RACK DETAIL
N.T.S.



TOP VIEW



SECTION B-B



SECTION A-A

SWM POND 1 OUTLET STRUCTURE (OS-1) DETAIL
N.T.S.

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\DT.DGN [SHEET: DT01]

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	AREA 5 MAINTENANCE YARD IMPROVEMENTS	CONTRACT T201380109 / COUNTY SUSSEX; BRIDGE NO.; DESIGNED BY: JMT; CHECKED BY: BPH	STORMWATER CONSTRUCTION DETAILS	SHEET NO. 9 / TOTAL SHTS. 10

INFILTRATION BASIN CONSTRUCTION SEQUENCE & NOTES (SWM FACILITY 940)

IF THE INFILTRATION BASIN IS TO BE USED AS A SEDIMENT BASIN DURING CONSTRUCTION, GRADING SHALL ONLY BE COMPLETED TO 1-FOOT ABOVE THE PERMANENT BOTTOM ELEVATION.

A. CONSTRUCTION:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AS NEEDED.

2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.

3. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PLANS.

4. CLEAR AND GRUB REMAINING AREA FOR STORMWATER MANAGEMENT FACILITY CONSTRUCTION.

5. CONSTRUCT BASIN OUTLET AND OUTFALL AS SHOWN ON THE PLANS. DEWATER FOUNDATION AS NEEDED IN ACCORDANCE WITH DEWATERING PRACTICES AS SHOWN IN THE STANDARD SPECIFICATIONS. INSTALL TEMPORARY MODIFICATION CONSISTING OF A BOARD OR PIECE OF PLYWOOD CLAMPED TO WEIR OPENING SO AS TO HAVE A WATER TIGHT SEAL WITH A TOP ELEVATION OF 23.0'. INSTALL SKIMMER DEWATERING DEVICE WITH AN OUTLET ELEVATION OF 22.5'.

6. EXCAVATE THE FACILITY AND COMPLETE TO 1-FOOT ABOVE THE PERMANENT BOTTOM ELEVATION. NO HEAVY EQUIPMENT SHALL BE USED AT THE PERMANENT BOTTOM ELEVATION. THE FINAL 1-FOOT OF MATERIAL TO BE EXCAVATED SHALL BE STARTED AT ONE SIDE OF THE BASIN AND WORKED TOWARDS THE OUTSIDES.

7. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - DRY GROUND AS SPECIFIED IN THE STANDARD SPECIFICATIONS. IF NOT MEETING FINAL ELEVATIONS AND GRADES, THEN SEED WITH TEMPORARY SEED - DRY GROUND AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

8. BASIN BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - WET GROUND.

B. MAINTENANCE OF INFILTRATION BASIN BEING USED AS A SEDIMENT BASIN:

1. THE CONTRACTOR SHALL INSPECT THE BASIN THE NEXT WORK DAY FOLLOWING A RAIN EVENT AND MAKE ANY REPAIRS AS NEEDED.

2. ANY EXCESS SEDIMENT AROUND THE OUTFALL AREA WILL BE REMOVED AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

C. CONVERSION TO PERMANENT STORMWATER MANAGEMENT FACILITY:

1. CONVERT THE BASIN INTO THE PERMANENT STORMWATER MANAGEMENT FACILITY AFTER ALL AREAS DRAINING TO THE BASIN HAVE ATTAINED FINAL STABILIZATION AND THE STORMWATER ENGINEER HAS APPROVED THE CONVERSION.

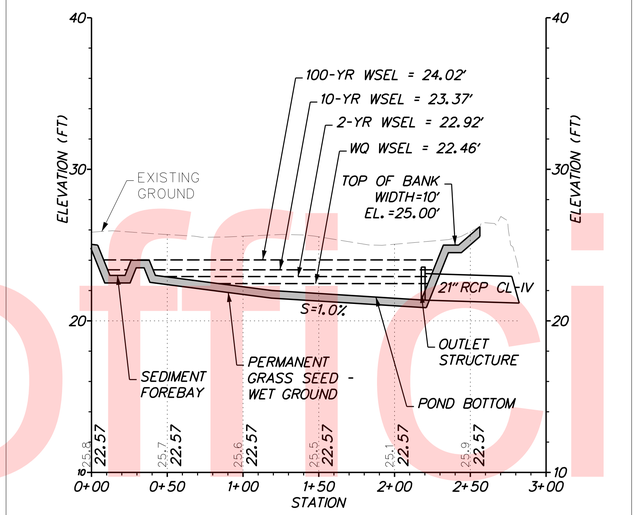
2. PUMP DOWN ANY STANDING WATER IN THE BASIN AS NECESSARY AS PER THE STANDARD SPECIFICATIONS.

3. REMOVE ANY EXCESS SEDIMENT. NO HEAVY EQUIPMENT SHALL BE USED AT THE PERMANENT BOTTOM ELEVATION. THE FINAL 1-FOOT OF MATERIAL TO BE EXCAVATED SHALL BE STARTED AT FROM ONE SIDE OF THE BASIN AND REMOVED GOING ACROSS OR STARTED IN THE MIDDLE AND WORKED TOWARDS THE OUTSIDES.

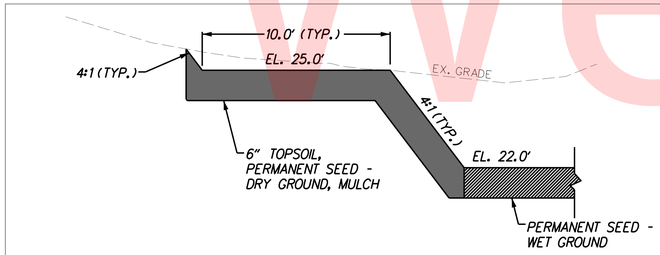
4. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - DRY GROUND AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

5. BASIN BOTTOM ELEVATION SHALL BE SEEDED WITH PERMANENT SEED - WET GROUND.

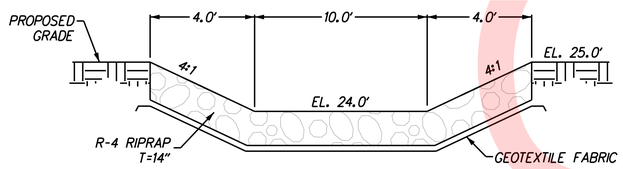
6. REMOVE TEMPORARY OUTLET STRUCTURE MODIFICATION AND SKIMMER DEWATERING DEVICE.



SWM POND 2 SPILLWAY PROFILE
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

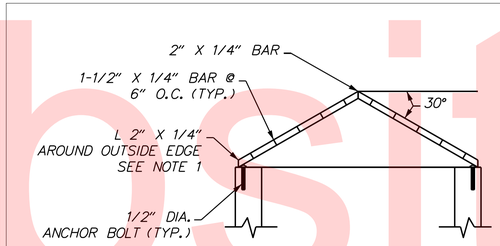


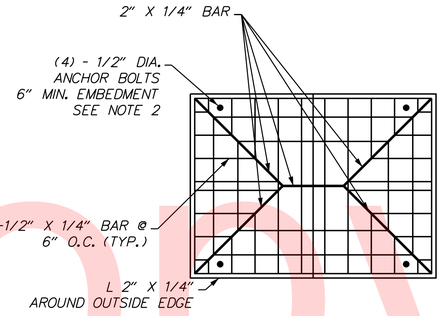
POND 2 EMBANKMENT SECTION A–A
N.T.S.



POND SEDIMENT FOREBAY 2 RIPRAP APRON
N.T.S.

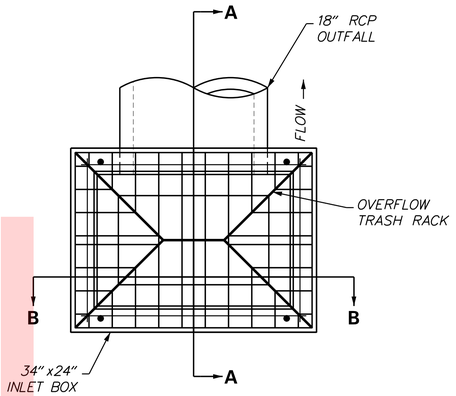
NOTES:
1. INSTALL RIPRAP APRON STARTING AT STA. 0+22.07.
2. RIPRAP APRON LENGTH: 20.0'



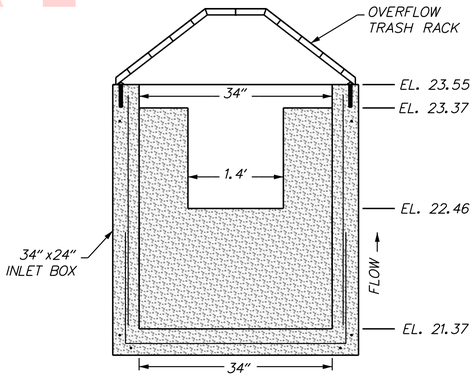


NOTES:
1. ANCHOR BOLTS TO BE STAINLESS STEEL ONLY.
2. TRASH RACK BARS TO BE ALUMINUM ONLY.

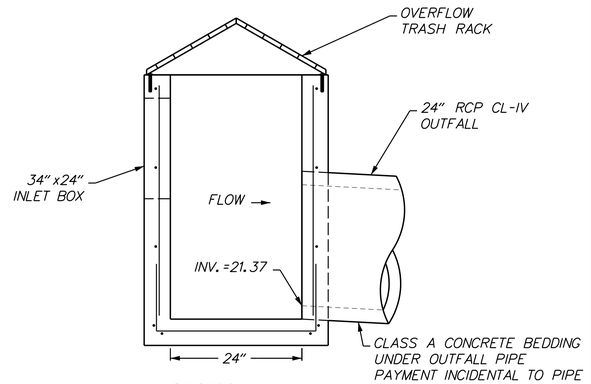
OVERFLOW TRASH RACK DETAIL
N.T.S.



TOP VIEW



SECTION B–B



SECTION A–A

SWM POND 2 OUTLET STRUCTURE (OS–2) DETAIL
N.T.S.

PLOTTED BY: MONTES DATE: 3/17/2016
FILE LOCATION: Q:\NDE\101552_026_DAGSBORO_YARD_IMPROV\CADD\DT.DGN [SHEET: DT02]

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

AREA 5 MAINTENANCE YARD IMPROVEMENTS

CONTRACT	BRIDGE NO.	
T201380109	DESIGNED BY: JMT	
COUNTY	CHECKED BY: BPH	
SUSSEX		

STORMWATER CONSTRUCTION DETAILS

SHEET NO.
10
TOTAL SHTS.
10